



<b>Botany &amp; Microbiology</b>	<b>Final Exam- 2<sup>nd</sup> semester 1437-1438-Course No. 102 Bot.</b>
<b>Date &amp; Time</b>	<b>Time (3 hours)</b>
<b>Student No.</b>	
<b>Student Name</b>	

**Q. I: Circle the letter T if the statement is true or F if the statement is false. (10 marks).**

1. Simple tissue is composed of groups of similar cells.	<b>T</b>	<b>F</b>
2. Amyloplasts (Leucoplasts) do not contain chlorophyll.	<b>T</b>	<b>F</b>
3. Bryophytes are flowering plants.	<b>T</b>	<b>F</b>
4. Active transport is the movement of substance with the concentration gradient.	<b>T</b>	<b>F</b>
5. Plastids contain grana and stroma.	<b>T</b>	<b>F</b>
6. Plant cannot remove CO <sub>2</sub> from the environment.	<b>T</b>	<b>F</b>
7. Mitosis starts with one diploid cell and ends with two haploid cells.	<b>T</b>	<b>F</b>
8. Parallel leaf venation is common in Dicot plants.	<b>T</b>	<b>F</b>
9. Long term adaptation is one characteristic of plant life.	<b>T</b>	<b>F</b>
10. Prokaryotes have a well-defined nucleus.	<b>T</b>	<b>F</b>
11. Chromosomes consist of DNA only.	<b>T</b>	<b>F</b>
12. Pollen grains in flowering plants are gametes.	<b>T</b>	<b>F</b>
13. Halophiles and thermophiles that are eukaryotic organisms.	<b>T</b>	<b>F</b>
14. Potato tuber is a modified stem for storage.	<b>T</b>	<b>F</b>
15. Genome includes genes and non-coding DNA organized in chromosomes.	<b>T</b>	<b>F</b>
16. Fungi are considered as eukaryotic organism.	<b>T</b>	<b>F</b>
17. Diffusion requires cell to use energy.	<b>T</b>	<b>F</b>
18. Inflorescence is a group of flowers.	<b>T</b>	<b>F</b>
19. The cortex surrounds the vascular cylinder.	<b>T</b>	<b>F</b>
20. In monocot stems the vascular bundles are arranged in one ring.	<b>T</b>	<b>F</b>

**Q II. A-** Read the first column and select a letter of the suitable term in the second column and put this letter in the answer table given below. (5 marks).

	Column I		Column II
1	Carbon dioxide is produced during	A	Cellulose
2	Phloem tissues have alive cells called	B	Alleles
3	Bacterial cells are typical	C	Roots
4	Alternate forms of genes are called	D	Prokaryotes
5	Plant absorbs water and minerals via	E	Companion
6	ATP is synthesized in the	F	Gene
7	The main component of primary plant cell wall is	G	Respiration
8	When alleles are different (e.g. Rr), it is called	H	Tonoplast
9	Vacuole membrane is called	I	Heterozygous
10	The unit of heredity information is called	J	Mitochondria

**The answer table:**

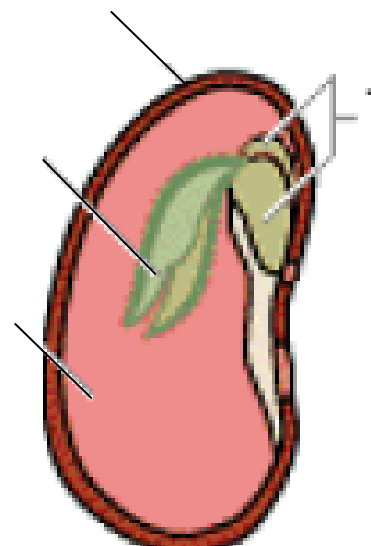
<b>1<sup>ST</sup> Column</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>2<sup>nd</sup> Column</b>										

**QII. B:** Identify the longitudinal section and put labels against lines marked \_\_\_\_\_ (5 marks).

This is .....

**Choose the suitable term from this list:**

- 1- First true leaves
- 2- Endosperm
- 3- Seed coat
- 4- Dicotyledon seed
- 5- Two cotyledons

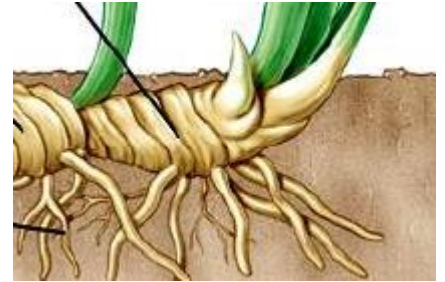


**Question III**

**(10 Marks)**

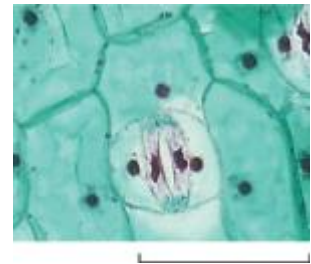
**Select the correct labels on these drawings:**

1. **Stem modified into**-----



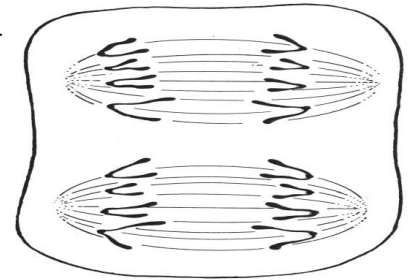
- a. Rhizome                      b. tuber                      c. cladophyll
- 

2. **This plant tissue is** -----



- a. xylem                      b. epidermis                      c. phloem
- 

3. **This phase of cell meiotic division is called** -----



- a. first anaphase                      b. second anaphase                      c. telophase
- 

4. **The plant part is considered as** .....



- a. shoot system                      b. root system                      c. adventitious roots
- 

5. **This flower belongs to a** .....



- a. Monocot                      b. Dicot                      c. Coniferous

**Q IV. Circle the right answer to the following from the options given (10 marks).**

**1. The root function is to perform**

- a. Water absorption      b. mineral absorption      c. nutrient uptake      d. all a, b, c.

**2. Proteins are produced by**

- a. lysosomes      b. plastids      c. ribosomes      d. vacuole

**3. What is the term of cell cytoplasm division?**

- a. Cytokinesis      b. Crossing over      c. anaphase      d. not a, b, c.

**4. Mendel's conclusion: the two alleles of each trait must separate when**

- a. petals form      b. gametes form      c. sepals form      d. fruit form

**5. Xylem tissue consists of \_\_\_\_**

- a. Sclerenchyma fibers      b. Tracheids      c. Vessels      d. all a, b, c.

**6. If a gene for red flower (R) is dominant over white flower (r).  
What is the genotype of the white flower?**

- a. RR      b. Rr      c. rr      d. not a, b, c.

**7. Which one of these belongs to the kingdom Eukaryotes?**

- a. plants      b. animals      c. fungi      d. all a, b, c.

**8. Chlorenchyma tissue contains \_\_\_\_.**

- a. leucoplast      b. chloroplast      c. fibers      d. not a, b, c.

**9. The Cell cycle consists of**

- a. Gap 1 phase      b. Synthesis phase      c. Gap 2 phase      d. all a, b, c.

**10. The Plasmodesmata function are :**

- a. cell connections      b. reproduction      c. storage      d. support